

ABSTRACT

A hologram color filter diffraction-separates an incident lightwave using a hologram to project thus separated lightwaves having different wavelengths at intended positions with a specified spatial period. The hologram color filter comprises a light-transmitting substrate (21) and a light-transmitting diamond-like-carbon (DLC) film (22) formed on the substrate. In the DLC film, a relatively-low-refractive-index belt-shaped region (n_1 , 22a) and a relatively-high-refractive-index belt-shaped region (n_2 , 22b) are placed alternately.